

IDENTIFYING ORGANISMS BY DETECTING INTRONIC NUCLEIC ACID OR ENCODED PROTEINS

ABSTRACT OF THE DISCLOSURE

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The present invention provides novel methods for characterizing organisms by identifying the presence, absence, size or sequence polymorphism of intronic regions. The method involves selecting intronic regions from nuclear or organellar gene sequences that are useful for differentiating between and
10 among taxonomic groupings of organisms. Such intronic regions can be analyzed directly or after amplification in a primer extension reaction. The amplification product is then analyzed by, for example, size fractionation, nucleotide sequencing or (RFLP). Intronic regions that contain an open reading frame encoding all or a portion of a protein can be used to generate antibodies to detect
15 the presence or absence of the protein, which indicates the presence or absence of the intronic region. Methods of detecting an organism in a sample by detecting the presence or absence of one or more intronic regions also are provided using nucleic acid based or immunological based approaches. Kits are provided for practicing the methods of the invention.

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